

Learning to organize digital information

Citation for published version (APA):

Walhout, J., Brand-Gruwel, S., & Martens, R. (2011). *Learning to organize digital information*. Poster session presented at 14th Biennial EARLI Conference for Research on Learning and Instruction, Exeter, United Kingdom.

Document status and date:

Published: 14/12/2011

Document Version:

Peer reviewed version

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

<https://www.ou.nl/taverne-agreement>

Take down policy

If you believe that this document breaches copyright please contact us at:

pure-support@ou.nl

providing details and we will investigate your claim.

Downloaded from <https://research.ou.nl/> on date: 05 May. 2023

Open Universiteit
www.ou.nl



Adaptive Instruction to foster students' information problem solving skills: learning to organize digital information

Jaap Walhout *, Saskia Brand-Gruwel & Rob Martens

Open University of the Netherlands

Problem

In today's information society people have to manage an overload of information adequately. Being able to search, find, evaluate, select, process, organize and present information in order to acquire new knowledge is an important skill. This skill is defined as information-problem solving (IPS). However, research shows that many students are not able to solve information-based problems successfully, and that they have especially problems with the ability to organize found information.

Organizing information in a proper way is not easy. Because people are used a hierarchical system, it seems natural to categorize information in classes and subclasses. Although hierarchical classification systems are a good way of bringing order in a collection of physical objects, with the use of virtual information objects it becomes possible to organize the information with labels or 'tags'. Consequently, information can be attributed to different classes. However, organizing information in a proper way is not a skill which is learned easily. Guidance and/or instruction is therefore needed.

Theoretical background

The ability to organize information during web searches is influenced by several aspects such as:

- Prior knowledge functions as an ontology for structuring newly found information.
- Meta-textual knowledge enhances text comprehension and thus the ability to organize.
- Task complexity and number of directions determine how difficult it is to solve the task.

Instruction in organizing web-based information should foster the use of a non-hierarchical tagging approach and make use of ontological schemes. Moreover this instruction should be embedded in the schools curricula and should be adaptive.

Future research

- Which approach is better: hierarchical or tagging?
- What is the effect of instruction on the skill of organizing information?
- How can instruction be made adaptive to the learners needs?

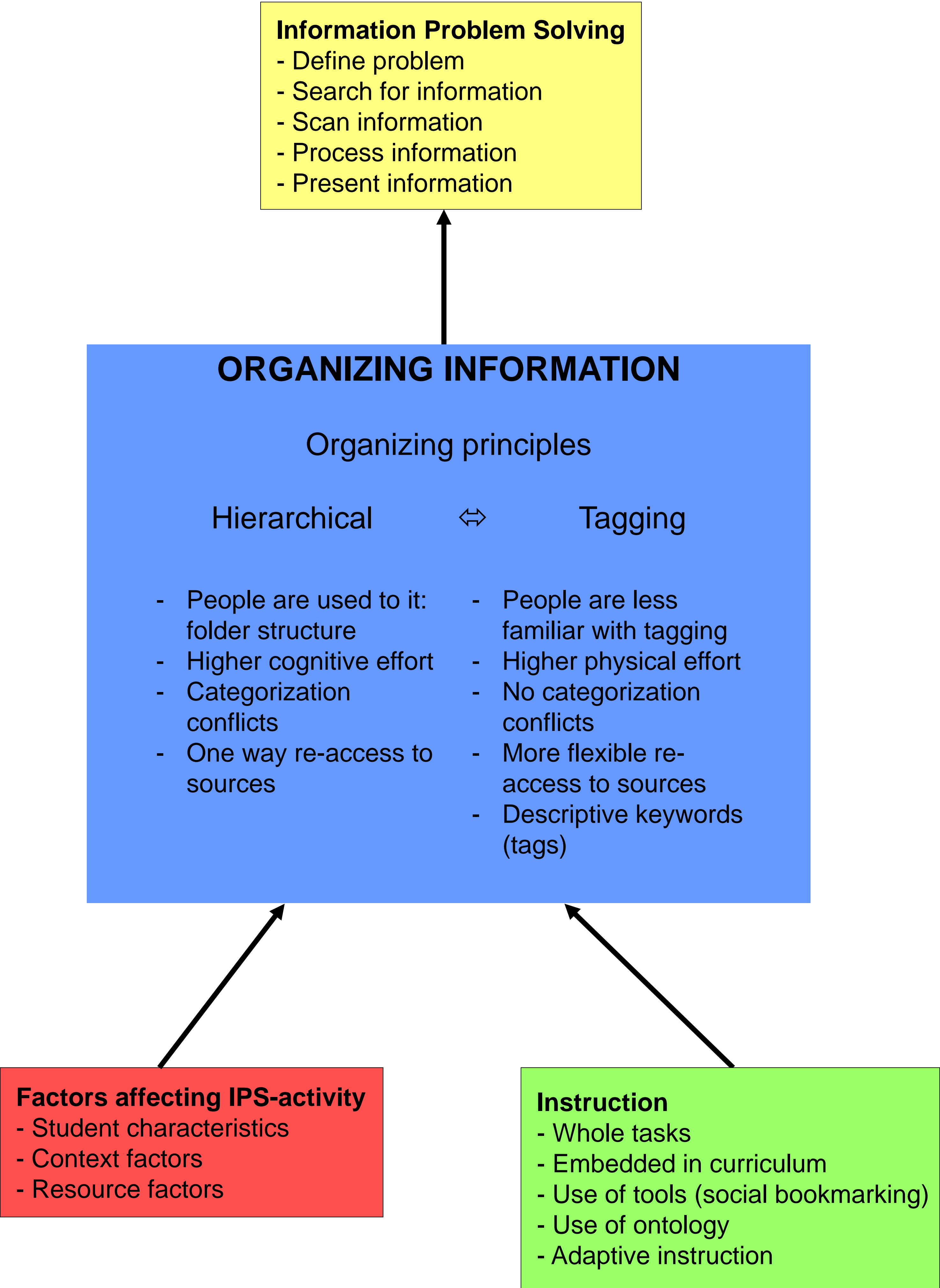
Research questions

Main question:

- How can instruction in organizing information best be designed?

Sub questions:

- How do people organize information?
- What factors influence the skill of organizing (internet) information?
- Which instructional design choices have to be considered when improving instruction?



* Corresponding author:

jaap.walhout@ou.nl

